COMMUNITY INVOLVEMENT PLAN FOR PORTLAND HARBOR
February 2011

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Introduction
COMMUNITY INVOLVEMENT HELPS SHAPE CLEANUP DECISIONS

A healthy environment and a thriving commercial harbor are important to Portland citizens, Oregon residents, and people from other states and countries. However, the sediments of Portland Harbor are currently contaminated with pesticides, heavy metals, and other hazardous substances from a century of historical industrial operations.

Over the next several years the Environmental Protection Agency (EPA) and the Oregon Department of Environmental Quality (DEQ) will be investigating, planning for cleanup

and cleaning up contamination and sources at the Portland Harbor Superfund Site. Both agencies must learn about the needs and priorities of the community in order to incorporate them into the cleanup decisions that will ultimately affect future use of the harbor.

This community involvement plan outlines how the EPA and DEQ plan to involve community members in the investigation and cleanup of the Portland Harbor Superfund Site. DEQ conducted significant public outreach between 1998 and 2000, with a series of community interviews, presentations and public meetings. The EPA and DEQ will continue to build on these efforts, and welcome your ideas.

ABOUT PORTLAND HARBOR

Portland Harbor lies within the final reach of the Willamette River upstream of where it joins with the Columbia River. The portion of Portland Harbor that lies between Swan and Sauvie Islands is heavily industrialized and is primarily zoned for commercial and industrial use. Although there is some residential development within the Portland Harbor site area, this area is likely to remain a working harbor.

Portland Harbor is one of the busiest seaports on the Pacific Coast. Since the mid-1800's, the shoreline of the Harbor has been consistently altered to accommodate urban development and a growing shipping industry. Before industrial development, this part of the River was an important natural resource for the region's Tribal populations, as well as a traditional ceremonial and cultural resource.

In addition to the major industrial activities that occur along the river and in Portland Harbor, there are other equally important uses that benefit the region. Recreational and subsistence fishing takes place in the Harbor and both up and downstream. Tribal fishing for both subsistence and ceremonial purposes continues to be a key activity. Swimming, and boating are other uses that bring people into contact with Portland Harbor.

Recent studies have identified many species of fish and wildlife using the Willamette River and Portland Harbor as a migratory pathway, including threatened and endangered runs of salmon. Fish-eating birds, migratory waterfowl, and raptors are seen seasonally in the lower Willamette River and Spring Chinook support sport and recreational fishing.

In December 2000 Environmental Protection Agency added Portland Harbor to the National Priorities List based on the results of a 1997 sediment sampling study. The list includes the nation's most contaminated hazardous waste sites that are targeted for investigation and cleanup. The hazardous substances currently found in river sediments and along the banks of the river are known to be harmful to humans, fish and wildlife, and may pose threats to humans, fish and wildlife in contact with Portland Harbor. EPA's work will evaluate the risks posed by these contaminated sediments.

For several years prior to the listing, the DEQ was engaged in cleaning up sources of

contamination at industrial sites along the banks of the river. Additional information on Portland Harbor before it was listed on the NPL can be found in Appendix B: Project Overview and Appendix C: History of Cleanup Activity

For additional background, see Appendix H for fact sheets about Portland Harbor.

WHAT WE HAVE HEARD SO FAR -

Community interest in Portland Harbor is high, due to cleanup activities at individual sites and other water quality issues on the Willamette River, such as combined sewer overflows. Public awareness of waterway contamination has also been heightened by conditions in the Columbia Slough, an 18-mile waterway that extends through Portland and enters the Willamette River, which contains pollution from industry, transportation uses, and development.

The Oregon Department of Environmental Quality laid a solid and extensive groundwork of gathering community concerns and sharing information in a series of meetings and community interviews in 1999 and 2000. The list of meetings is available by request from Kim Cox at DEQ. In 2001, EPA and DEQ project managers and community involvement coordinators continued to gather information about community concerns.

Here is a brief summary of some major issues and concerns shared with EPA and DEQ to date:

- Cleanup should be coordinated with efforts to prevent re-contamination of the harbor.
- Should dredging be used as a method to clean up contamination in harbor?
- Where and how should contaminated sediments be disposed of?
- Continued economic viability of the harbor and Portland metro area should be a priority.
- Will businesses be able to continue to operate during and after the cleanup?
- How will people know that the fish in the harbor are safe to eat?
- Will the involvement of different government agencies and tribal governments slow down the investigation and cleanup?
- How will unsafe conditions be posted and advertised?
- How do contaminated sediments affect water quality?
- How much contamination is there; how far does it extend?

OBJECTIVES:

Five community involvement objectives are identified in this plan, and a series of activities are proposed to help EPA and DEQ meet these objectives. As the investigation and cleanup of Portland Harbor proceeds, the agencies will evaluate which activities meet the needs of the public. At any time, if members of the community identify a specific activity or tool that can aid their participation in the cleanup process, let EPA and DEQ know! Community involvement can help project managers shape good decisions that will both meet the needs of the community and satisfy legal and regulatory

environmental requirements.

The objectives of this community involvement plan are to:

1. Provide opportunities for public participation that will effectively incorporate community concerns into cleanup decisions.

2. Provide consistent, regular and timely information about the investigation and cleanup plans and activities for Portland Harbor sediments and upland sites.

3. Identify affected communities and key stakeholders and establish regular and open dialogue to respond to questions, concerns and conflicts as they arise.

4. Meet statutory requirements regarding public notice and opportunities for public involvement.

5. Evaluate the effectiveness of this community involvement plan and make changes as needed.

PUBLIC INVOLVEMENT STRATEGY

The following section identifies public outreach activities that may be used to help EPA and DEQ satisfy the goals of this plan. The audience for these efforts will include those who are:

- Affected by environmental impacts or cleanup work in Portland Harbor
- Involved in site investigation activities or cleanup activities along the Harbor; and
- Interested in cleanup work in the Harbor or are interested in issues related to the Willamette River

Members of the community have told us that many of these public involvement tools would be helpful for keeping them informed or involved. This list is organized by the objectives stated earlier in this plan. Many activities may contribute towards meeting more than one objective. Again, these are options both the agencies and the community can consider as the cleanup proceeds.

1. Provide opportunities for public participation that will effectively incorporate community concerns into the decision making process.

Public review of documents: The process of investigating, planning for cleanup and cleaning up contamination in Portland Harbor will be open to public scrutiny. A number of draft reports, work plans and sampling results will be generated during the Remedial Investigation and Feasibility Study. These documents will be available for public review after the project managers determine they have been through appropriate quality control. The appropriate time is generally when draft documents have been reviewed for accuracy and completeness by the project

team. Documents will be posted on the EPA Portland Harbor web site, and they will be available upon request from EPA. Appendix I: Glossary and Appendix J: Table of Acronyms are provided for use while reading these documents.

Comments received outside of formal public comment periods will be shared with project managers and the project team, then placed in the administrative record, but they will not receive a written response from EPA.

Technical Assistance: A Technical Assistance Grant provides independent technical review and interpretation of project information for the community. EPA advertised the availability of this grant in December 2000 and it was awarded to Willamette Riverkeeper in August 2001. Willamette Riverkeeper is a non-profit organization dedicated to the purpose of "working to make the Willamette River watershed healthy for fish and wildlife and safe for fishing and swimming, forever and for all." To contact Willamette Riverkeeper, call 503-223-6418.

Informal communication: Project managers and community involvement coordinators are always willing to meet with stakeholders and community members to discuss new developments on the investigation and cleanup, as well as to keep up-to date on community issues and concerns.

Citizens Advisory Groups: EPA and DEQ community involvement coordinators will assist community members if they desire to form a Citizens Advisory Group to provide a conduit for information between project managers and the community. Such a group would need to represent a wide spectrum of community interests in order to be effective.

Feedback: Judy Smith, EPA, and Kim Cox, DEQ, are the project's Community Involvement Coordinators, and are available to talk with anyone who has concerns or questions about the Portland Harbor investigation and cleanup. Both Judy and Kim will share the information they gather with the project management team.

2. Provide consistent, regular and timely information about the investigation and cleanup plans and activities for Portland Harbor sediments and upland sites.

Fact Sheets: EPA and DEQ will issue periodic fact sheets about cleanup activities, significant milestones in the investigation, technical information, and project findings. The fact sheets will be mailed to the Portland Harbor mailing list, and be posted on the EPA and DEQ Portland Harbor Web pages.

Articles: Articles will be periodically submitted to trade publications and local newspapers.

Meetings: Project managers and community involvement coordinators are available to attend regularly scheduled meetings of community groups and

neighborhood associations upon request.

Availability Sessions: Project managers and community involvement coordinators will consider whether there is community interest in holding open houses and workshops to make information widely available at significant milestones in the investigation and cleanup process.

Project Mailing List: EPA and DEQ will maintain and regularly update their respective Portland Harbor mailing lists to make sure stakeholders and neighbors receive information about the site. To get on the mailing list, send a request by e-mail, phone or mail to EPA or DEQ contacts listed above. As of September 2001, there were approximately 900 people and organizations on the project mailing list.

Information Repositories: EPA will establish sites within the community where people can review project documents. Information repositories will be maintained at the Multnomah County Library and St. Johns Library. Information may also be requested from DEQ and EPA offices.

News Releases: Significant project news and milestones will be shared with the Portland metropolitan area through mass media outlets. A list of local media outlets is contained in Appendix F.

Web Sites: The EPA and DEQ will maintain project web sites where most publicly available information about the project can be viewed. There are two ways to access the EPA Portland Harbor web site. One way is to type: http://yosemite.epa.gov/r10/cleanup.nsf/sites/ptldharbor. You can also type: www.epa.gov/r10earth/, click on Index, then select P and Portland Harbor. To view DEQs website go to www.deq.state.or.gov/nwh/ph/.

Partnerships: EPA and DEQ Community Involvement Coordinators will support the efforts of community partners to share project information where appropriate.

3. Identify affected communities and key stakeholders and establish regular and open dialogue in order to respond to questions, concerns and conflicts as they arise.

Community Interviews: Twenty-five community interviews were conducted by DEQ in the fall of 1999. EPA and DEQ conducted six additional interviews in July 2001. Additional interviews will be conducted in fall of 2001 as planning for the Remedial Investigation and Feasibility Study continues.

Outreach to targeted populations: Portland has a well-developed network of neighborhood associations including several adjacent to the Portland Harbor site who have expressed willingness to relay information between the agencies and the community. In addition to measures outlined elsewhere in this document, special efforts may be taken to reach the following parts of the affected Community:

Subsistence anglers: Work with community groups and agencies to communicate with subsistence fishing populations who may be at additional risk.

Recreational users: Develop messages and determines locations for informational signing in locations such as boat launches and community parks. Have interagency information booths or displays at boat and fishing shows and other local events.

Non-English speaking: EPA will translate information into other languages if there is sufficient need and interest.

Tribal populations: EPA and DEQ will work with each Tribal government on the Portland Harbor team to identify the specific information and education needs for Tribal members.

4. Meet statutory requirements regarding public notice and opportunities for public involvement.

EPA Project managers and community involvement coordinators will make sure all legal requirements for public involvement in the investigation and cleanup process for the Portland Harbor process will be met or exceeded. A list of required and recommended activities is contained in Appendix A1 of this plan.

5. Evaluate the effectiveness of this community involvement plan and make changes accordingly

EPA and DEQ will elicit feedback on our public outreach program through surveys and comments received by e-mail and phone. The Community Involvement Plan will be updated when needed to incorporate feedback received.

HOW THE PROJECT WILL BE MANAGED

The work done by EPA and DEQ in Portland Harbor will be governed by applicable laws, including the comprehensive Environmental Response, Compensation and Liability Act (CERCLA), as amended by the Superfund Amendments and Reauthorization Act (SARA) of 1986 as well as the State of Oregon's Environmental Cleanup Law (Oregon Revised Statutes 465-200 et. seq.), the Clean Water Act, the Endangered Species Act and other applicable laws and regulations.

The EPA and DEQ will manage the investigation and cleanup of Portland Harbor jointly. EPA is responsible for in-water sediments, and DEQ is responsible for upland sites along the banks of the river. DEQ will also be responsible for coordinating the Portland Harbor work with other state and local efforts such as the Governor's Oregon Plan and the City

of Portland Combined Sewer Overflow (CSO) project. The map on page XX shows DEQ cleanup sites and the area of sediment contamination that will be investigated.

EPA and DEQ are part of a larger inter-governmental coordination team that includes the National Oceanic and Atmospheric Administration, the Oregon Department of Fish and Wildlife, the U.S. Department of the Interior, the Confederated Tribes and Bands of the Yakama Nation, the Confederated Tribes of the Grand Ronde Community of Oregon, the Confederated Tribes of Siletz Indians, the Confederated Tribes of the Umatilla Indian Reservation, the Confederated Tribes of the Warm Springs Reservation of Oregon, and the Nez Perce Tribe.

These six Tribal governments have expressed interest in the Portland Harbor work because of:

- treaty rights that provide access to the river's resources;
- historical use of the area for fishing and cultural purposes;
- importance of fish and lamprey eel for sustenance and ceremonial purposes; and
- their roles as natural resource trustees charged with protection of fish and wildlife

The relationship and responsibilities of this project management team are established in a Memorandum of Understanding (MOU) dated February 8, 2001. The MOU is available at the EPA and DEQ web sites or upon request from EPA or DEQ.

This plan will be a basis for providing information to affected tribal community members, and both EPA and DEQ will be working with the Tribal members of the intergovernmental project team to identify any specific needs of Tribal members. However, Both EPA and DEQ have obligations to consult with Tribal governments on a government–to government basis, and EPA has a trust responsibility to the Tribes as a federal agency. Community outreach activities are separate from trustee responsibilities and consultation between governments.

EPA and DEQ project managers and staff will routinely brief local, state and federal legislators about progress on the Portland Harbor investigation and cleanup. These briefings will provide a way for information about the project to be shared with the legislator's constituents. In return, legislators will be able to convey emerging concerns of their constituents back to EPA and DEQ.

WHO TO CONTACT ABOUT COMMUNITY INVOLVEMENT:

This public involvement plan is designed to be flexible. It reflects our current knowledge about the community and its concerns, but it will need to be revised if those conditions change. This plan is intended to be a working document, changing as community concerns emerge and more information becomes available.

Questions, comments and requests can be directed to:

Judy Smith, EPA Community Involvement Coordinator

800 SW Broadway, Suite 500
Portland, OR 97205
smith.judy@epa.gov

CLEANUP PROCESS TIMELINE

ACTION PLAN

APPENDICES

Appendix A: This Page{{{ Significant Public Involvement Events in the Superfund Cleanup Process –
(Figure 1 from 4/18/2000 DEQ PI Plan) or Road to ROD}}}

Appendix A1:

Required Public Involvement Activities from pages 78-82 of the Superfund Community Involvement Handbook).

Remedial Actions and NPL Additions

Site Activity: Publication of Proposed Rule and Public Comment Period
Minimum Requirements: EPA must publish the proposed rule in the *Federal Register* and seek comments through a public comment period
Reference: NCP 40 C.F.R. 300.425(d)(5)(i)

Site Activity: Publication of Final Rule and Response to Comments
Minimum Requirements: EPA must publish the final rule in the Federal Register and respond to significant comments and significant new data submitted during the comment period.
Reference: NCP 40 C.F.R. 300.425(d)(5)(i)

Prior to Remedial Investigation (RI)

Site Activity: Community Interviews
Minimum Requirements: The lead agency must conduct interviews with local officials, public interest groups, and community members to solicit their concerns and information needs and to learn how and when people would like to be involved in the Superfund process
Reference: NCP 40 C.F.R. 300.430(c)(2)(i)

Site Activity: Community Involvement Plan
Minimum Requirements: Before commencing field work for the remedial investigation, the lead agency must develop and approve a complete CIP, based on community

interviews and other relevant information, specifying the community involvement activities that the lead agency expects to undertake during the remedial response.
Reference: NCP 40 C.F.R. 300.430(c)(2)(ii)

Site Activity: Information Repository
Minimum Requirements: The lead agency must establish at least one information repository at or near the location of the response action. Each information repository should contain a copy of items developed, received, published or made available to the public including information that describes the Technical Assistance Grant application process. The lead agency must make these items available for public inspection and copying and must inform interested citizens of the establishment of the information repository.
Reference: SARA 117(d); NCP 40 C.F.R. 300.430(c)(2)(iii)

Site Activity: Technical Assistance Grant (TAG) Notification
Minimum Requirements: The lead agency must inform the public of the availability of Technical Assistance Grants and include in the information repository material that describes the technical assistance grant application process.
Reference: NCP 40 C.F.R. 300.430(c)(2)(iv)

Upon Commencement of Remedial Investigation

Site Activity: Administrative Record
Minimum Requirements: The lead agency must establish an administrative record, make it available for public inspection, and publish a notice of its availability. The lead agency must comply with the public participation procedures required in 300.430(f)(3) and shall document such compliance in the administrative record.
Reference: SARA 113(k); NCP 40 C.F.R. 300.815(a-c)

Site Activity: Administrative Record Notification
Minimum Requirements: The lead agency must publish a notice of availability of the administrative record in a major local newspaper of general circulation.
NCP 40 C.F.R. 300.815(a)

Upon Completion of the Feasibility Study (FS) and Proposed Plan

Site Activity: RI/FS and Proposed Plan Notification and Analysis
Minimum Requirements: The lead agency must publish a notice of the availability of the RI/FS and Proposed Plan, including a brief analysis of the Proposed Plan, in a major local newspaper of general circulation. The notice also must announce a comment period.
Reference: SARA 117(a) and (d); NCP 40 C.F.R. 300.430(f)(3)(i)(a)

Site Activity: Public Comment Period on RI/FS and Proposed Plan

Minimum Requirements: The lead agency must provide at least 30 days for the submission of written and oral comments on the Proposed Plan and supporting information located in the information repository, including the RI/FS. This comment period will be extended by a minimum of 30 additional days upon timely request.
Reference: SARA 113(k); NCP 40 C.F.R. 300.430(f)(3)(c)

Site Activity: Public Meeting
Minimum Requirements: The lead agency must provide an opportunity for a public meeting regarding the Proposed Plan and supporting information to be held at or near the site during the comment period.
Reference: SARA 113 and 117(b); NCP 40 C.F.R. 300.430(f)(3)(i)(D)

Site Activity: Meeting Transcript
Minimum Requirements: The lead agency must have a court reporter prepare a meeting transcript that is made available to the pubic.
Reference: SARA 117(a)(2); NCP 40 C.F.R. 300.430(f)(3)(i)(E)

Site Activity: Notice and Comment Period on Enforcement Agreements and Consent Decrees
Minimum Requirements: A notice of the proposed settlement must be published in the federal Register at least 30 days before the agreement becomes final. This notice must state the name of the facility and the parties to the proposed agreement. Those persons who are not parties to the agreement must be provided an opportunity to file written comments for a period of 30 days.
Reference: SARA 122(i); NCP 40 C.F.R. 300.430(c)(5)(i) and (ii)

Pre-Record of Decision Significant Changes

Site Activity: Responsiveness Summary
Minimum Requirements: The lead agency must prepare a response to significant comments, criticisms, and new data submitted on the Proposed Plan and RI/FS, and ensure that this response document accompanies the Record of Decision (ROD)
Reference: SARA 113 and 117(b); NCP 40 C.F.R. 300.430(f)(3)(i)(F)

Site Activity: Discussion of Significant Changes
Minimum Requirements: The lead agency must include in the ROD a discussion of significant changes and the reasons for such changes and the reasons for such changes, if new information is made available that significantly changes the basic features of the remedy and the lead agency determines that the changes could be reasonably anticipated by the public.
Reference: NCP 40 C.F.R. 300.430(f)(3)(ii)(A)

Site Activity: Revised Proposed Plan and Public Comment
Minimum Requirements: Upon the lead agencies determination that such changes could not have been reasonably anticipated by the public, the Agency must issue a revised Proposed Plan that includes a discussion of the significant changes and the reasons for

such changes. The Agency must seek additional public comment on the revised Proposed Plan
Reference: NCP 40 C.F.R. 300.430(f)(3)(ii)(B)

After the ROD is Signed

Site Activity: ROD Availability and Notification
Minimum Requirements: The lead agency must make the ROD available for public inspection and copying at or near the site prior to the commencement of any remedial action. Also, the lead agency must publish a notice of the ROD's availability in a major local newspaper of general circulation. The notice must state the basis and purpose of the selected action.
Reference: NCP 40 C.F.R. 300.430(f)(6)

Site Activity: Revision of the CIP Site Activity
Minimum Requirements: Prior to the remedial design, the lead agency should revise the CIP, if necessary, to reflect community concern, as discovered during interviews and other activities, that pertain to the remedial design and construction phase.
Reference: NCP 40 C.F.R. 300.435(c)(1)

Post-ROD Significant Changes

Site Activity: Notice and Availability of Explanation of Significant Differences
Minimum Requirements: The lead agency must publish a notice that briefly summarizes the explanation of significant differences (ESD) and the reasons for such differences in a major local newspaper, and make the explanation of significant differences and supporting information available to the public in the administrative record and information repository.
Reference: NCP 40 C.F.R. 300.435(c)(2)(i) (A) and (B)

Site Activity: Notice of Availability/ Brief Description of Proposed ROD Amendment
Minimum Requirements: The lead agency must propose an amendment to the ROD and issue a notice of the proposed amendment in a major local newspaper of general circulation.
Reference: NCP 40 C.F.R. 300.435(c)(2)(ii)(A)

Site Activity: Public Comment Period, Public Meeting, Meeting Transcript and Responsiveness Summary
Minimum Requirements: The lead agency must follow the same procedures for notice and comment as those required for completion of the feasibility study (FS) and the Proposed Plan.
Reference: NCP 40 C.F.R. 300.435(c)(2)(ii) (B)-(F)

Site Activity: Notice and Availability of the Amended ROD
Minimum Requirements: The lead agency must publish a notice of availability of the amended ROD in a major local newspaper and make the amended ROD and supporting

information available for public inspection and copying in the administrative record and information repository prior to commencement of the remedial action affected by the amendment.
Reference: NCP 40 C.F.R. 300.435(c)(2)(ii) (G) and (H)

Remedial Design

Site Activity: Fact Sheet and Public Briefing
Minimum Requirements: Upon completion of the final engineering design, the lead agency must issue a fact sheet and provide a public briefing, as appropriate, prior to beginning remedial action.
Reference: NCP 40 C.F.R. 300.435(c)(3)

Appendix B: Project Overview

The City of Portland (population approximately 510,000) is located in Multnomah County, Oregon and contains approximately 20% of the state's population. The Portland metropolitan area has a population of about 1.3 million.

While its economy was based principally on resource harvesting in its early days (driven by the availability of fish, timber, minerals, and agricultural lands), the principle industries of the Portland metropolitan area are now manufacturing, tourism, transportation, and wholesale and retail trade, with the largest employer in the area being the Intel Corporation, a producer of high-technology microcomputer chips.

The shoreline features steeply sloped banks covered with riprap or constructed bulkheads, with manmade structures such as piers and wharves extending out over the water. To accommodate shipping, the River has been dredged, causing steep slopes in many portions of the riverbed. Channel depths currently range from 10 to 140 feet, with an average depth of 45 feet. In this reach, the river is deep, slow moving, and the water level rises and falls from tidal influence.

Portland Harbor is one of the busiest seaports on the Pacific Coast. Since the mid-1800s, when the first wharves were constructed to support international and intercoastal steamship service, the shoreline of the river near Portland has been consistently altered to accommodate urban development and a growing shipping industry. In 1968, the first river dredging was conducted and, since that time, the Willamette River has been continually dredged for navigation and maintenance. In 1996, more than 28 million tons of goods were exported through the Columbia and lower Willamette River, including wheat, corn, forest products, and soda ash. Approximately 3.8 million tons of commodities were imported during the same year, including alumina, limestone, cement, and crude salt. Some of the historical or current industrial operations along Portland Harbor include:

marine construction
bulk petroleum product storage and handling

construction material manufacturing
oil fire fighting training activities
oil gasification plant operations
pesticide/herbicide manufacturing
wood treating operations
agricultural chemical production
battery processing
liquid natural gas plant operations
hazardous waste storage
chlorine production
ship loading and unloading; ship maintenance, repair, and refueling
rail car manufacturing
metal scrapping and recycling

In addition to the major industrial activities that occur along the river and in Portland Harbor, there are other equally important uses that benefit the region. Recreational and possibly subsistence fishing takes place within the Harbor and both up and downstream. Recent studies have identified many species of fish and wildlife along the Willamette River, which is a migratory pathway, and within the Portland Harbor area. The Endangered Species Act listings of selected salmon species as threatened increase the importance of those resources. Species such as fish-eating birds, migratory waterfowl, and raptors are seen in the lower Willamette River during various times of the year and Spring Chinook support sport and recreational fishing. Tribal fishing is a key activity as well as fishing for recreation and eating. Swimming and boating are other uses that bring people into contact with Portland Harbor.

Historic development of the Willamette River led to an increase in its use for transportation, water supply, and waste disposal. The disposal of raw sewage and waste degraded water quality, and by the 1920s, water pollution prevented the passage of game fish, and bacteria made the water unsafe for human use. In the 1950s, the City of Portland developed and implemented a sewage management plan to minimize the discharge of raw sewage into the River. Other cleanup activities in Portland Harbor and surrounding portions of the Willamette River have been ongoing since the early 1970s, when controls were placed on industrial discharges and municipal waste disposal facilities were constructed throughout the Willamette Basin. Pollutants continue to be released from historical operations and stormwater drains along the river, but there are no known direct discharges from current practices.

Appendix C – History of Cleanup Activity Along the Harbor

What Cleanup Work Has Already Occurred?

Beginning in the late 1980s, DEQ's cleanup program began working with parties associated with known releases to the Harbor, providing oversight of investigation and cleanup activities. In cases where responsible parties were no longer viable, DEQ has used an Orphan Site Account to fund the necessary response measures as authorized

under the Oregon Environmental Cleanup Law. The McCormick and Baxter and Gould sites were listed on the EPA National Priorities List and DEQ worked in cooperation with EPA to complete investigation and cleanup. Over 40 facilities within Portland Harbor have initiated cooperative relationships with DEQ under the Voluntary Cleanup Program. A list of the sites, their environmental issues and stage of investigation or cleanup is included in Appendix G.

An EPA-funded study of sediments in Portland Harbor, conducted in May 1997, found elevated levels of PCBs, pesticides, herbicides, metals, dioxins, arsenic, chromium, and petroleum-related hydrocarbons. Sediment plays a key role in the river ecosystem, serving as the starting point for its food chain (fish feed on the microorganisms that live in sediment), and the contamination can have impacts on both marine life and human health. The levels of contamination found in the sediments led EPA to place the Portland Harbor site on the National Priorities List for cleanup under federal regulations.

Appendix D: Summary of Pre-NPL Listing Public Involvement by DEQ

From the end of 1998 to the end of 2000, DEQ staff conducted 25 community interviews and attended dozens of presentations, conferences and meetings. Through this work, DEQ identified key community stakeholders, Media Contacts (Appendix F), and developed a mailing list of over 900 interested parties. A key message heard from the community during that time was the need to be kept regularly informed on progress at Portland Harbor with material that translates highly technical information into language that can be understood by a broad audience.

. From late 1998 to June 1999, DEQ focused on providing information to the public on harbor-wide cleanup activities, and the State's efforts to keep the harbor cleanup under state lead. Public involvement activities took many forms, in order to reach a wide range of stakeholders. Activities included:

Over 50 presentations, meetings, and opportunities for dialogue with environmental and public interest groups, business owners, neighborhood associations, and river users in which the state's cleanup approach, including differences between the state approach and Superfund, were described.
Development of information materials, including fact sheets and question-and-answer papers.
A public comment period on the draft Portland Harbor Sediment Management Plan (PHSMP), outlining the state approach to harbor cleanup, in which DEQ asked for input on the outlined approach and addressed public concerns through preparation of a responsiveness summary.
Open house at which DEQ's project manager and technical resources, EPA, U.S. Army Corps of Engineers, City of Portland, potentially responsible parties, and environmental interest group representatives, were available to answer questions, provide information on the cleanup, and respond to public issues and concerns.

Public meetings sponsored by Northwest Environmental Advocates, funded by a DEQ technical assistance grant, at which input was received about the state's approach versus Superfund, and subsequently addressed in the final PHSMP.
Regularly updated web site with project information materials available for review and downloading.

Issues that were heard throughout the public involvement activities are summarized below,

How will coordination between other programs and agencies, such as water quality efforts, occur? How will laws applying to contaminated sediments and proposed plans for dredging be coordinated?
Will other parts of the Willamette River that need attention be ignored during cleanup of this relatively small stretch of the waterway? .
Will cleaning up of existing contamination be done in parallel with an effort to ensure future contamination does not occur?
How will people know that fish in Portland Harbor are safe to eat?
Will the sites along the Harbor be posted?
The following activities were conducted by DEQ from June 1999 through March 2000:
Solicited stakeholder input during development of RI/FS work plan by forming Technical Exchange Workgroup and Stakeholder Advisory Group with representatives of natural resource agencies, tribal governments, environmental groups, community and neighborhood interests, potential responsible parties, and other state and federal agencies. The two groups met a total of 17 times during a 5-month period. DEQ prepared comment responses to input received and issues raised during plan development.
Updated fact sheet describing the project status and mailed to interested parties mailing list.
Conducted 25 interviews with a cross section of community representatives, including environmental and public interest groups, business owners, river users, neighborhood residents, local government, and ethnic populations.
Regularly updated the Internet web site with project information materials available for review and downloading.
Involved in over 15 additional meeting, presentations or activities that provided the community information on the Portland Harbor project.

Community Interviews

As suggested in EPA's guidance for community relations at Superfund sites, between September and November 1999, DEQ conducted 25 interviews with a cross section of community representatives, including environmental and public interest groups, business owners, river users, neighborhood residents, local government, and ethnic populations.

Interviewees were selected to ensure a broad representation of potentially interested or affected parties. Many of them were aware of cleanup activities ongoing in Portland Harbor, specifically the McCormick and Baxter site, but there was a wide range of awareness about other cleanup activities, risks to human health and the environment,

and the difference between a federally-led versus state-led cleanup process. The purpose of these interviews was to identify key community concerns, level of understanding about cleanup activities in Portland Harbor, and solicit suggestions for how to involve the public in the cleanup process.

What We Heard From the Public

Understanding of Portland Harbor

Most interviewees were aware of pollution and contamination problems in the Willamette River, but there were varying levels of understanding about the extent of the problem, what is being done about it, and how it affects the general public. Most information received about Portland Harbor has been through the media or from neighbors or other river users. Some interviewees had seen deformed fish, a reduction in the fish population over time, or sewage overflows. Generally, the public wants to see a cleaned up river, but is not familiar with the technical complexity of the cleanup process.

Public Questions and Concerns

Environmental Health Risks – The Willamette River and other nearby water bodies are used for fishing, swimming, and boating. Thus, a number of interviewees raised health risk-related issues and questioned whether these activities should continue. It has been noticed that even when signs are posted warning of health risks, many people ignore the notices and continue to use the water. For example, some fishermen believe that simply cleaning the fish will remove any contamination. Another health risk concern was the transportation of contaminated sediments through residential areas once cleanup begins.

Economic Development – The economy of the region is an important issue for the City of Portland and businesses along Portland Harbor. Small business owners also stressed the need to ensure the local economy remains strong. Significant concerns were raised by some of the interviewees regarding the stigmatism associated with a Superfund listing or any designated cleanup site. Some interviewees felt there should be a balance between the needs of the industries and jobs along the river with the need of the greater community to have a clean River. Other interviewees felt that cleanup of the river should take precedence over any economic concerns.

Other Environmental Issues – The public is aware of other environmental issues in the Portland area and had questions as to how water quality overall was being coordinated. Concerns were also raised about suspended contaminated sediments moving downstream following removal actions. Potential recontamination from upland properties was raised as well as the impact on fish and wildlife in and downstream of Portland Harbor and how those resources would be protected or restored. Also, many were aware of proposed plans to dredge portions of Portland Harbor and questioned what kind of impact would occur on the contaminated sediments if those plans moved forward. The City of Portland has been working extensively over the last several years on the outflow of sewage into the river. This project has raised public awareness of the overall water quality of the river and is a more visible concern for most citizens than sediment contamination in Portland Harbor.

Who will lead the Cleanup?
A majority of the interviewees agreed on the point of holding businesses responsible for the contamination they caused. Some government agencies are concerned about paying for cleanup in Portland Harbor and having to pass those costs onto ratepayers. This led some to encourage a collaborative approach with businesses along Portland Harbor to ensure cooperation and any necessary cleanup action is completed. However, others were concerned about the enforcement needed to ensure responsible parties were accountable and paid for cleanup activities.

Enforcement
Few interviewees understood the differences between a federal and state cleanup. Some of those who were not familiar with either the EPA or DEQ approach to cleanup, expressed an opinion based on their personal beliefs about the role of federal and state levels of government. Those in favor of a federally led cleanup felt that there would be less business influence over the process, more funding and resources available, greater protection of natural resources, and a greater regulatory hammer. Others felt that a state-led cleanup would give more local control over the process and ensure that cleanup happens more efficiently, while offering the same level of regulatory authority and cleanup standards. In general, interviewees were in favor of a state-led approach as long as DEQ can accomplish the cleanup in a manner that protects human health and the environment.

From April 2000 to December 2000, DEQ continued its public involvement efforts by providing updated fact sheets, updating the web page and attending over 15 meetings with various stakeholders in the community

Appendix J: Acronyms

ACRONYM-DEFINITION
AET-Apparent Effects Thresholds
AML-Arc Macro Language
ANOVA-Analysis of Variance
ARARs-Applicable or relevant and appropriate requirements
ARL-Acceptable Risk Level
ASTs-Aboveground Storage Tanks
B-COCs-Bioaccumulative chemicals of concern
BMPs-Best Management Practices
BRI-Benthic Response Index
BSAF-Biota-Sediment Accumulation Function
BTs-Bioaccumulation Triggers
CAS-Chemical Abstract Service
CBRs-Critical Body Residues
CERCLA-Comprehensive Environmental Response, Compensation, and Liability Act
CERCLIS-Comprehensive Environmental Response, Compensation and Liability Information System
CFR-Code of Federal Regulations

COC-Contaminants of Concern
COE-Corps of Engineers
COI-Contaminants of Interest
COPC-Contaminants of Potential Concern
CPEC-Contaminants of Potential Ecological Concern
CPFs-Cancer Potency Factors
CSF-Cancer Slope Factor
CSOs-Combined Sewer Outflows
CWA-Clean Water Act
DDD-Metabolite of DDT
DDE-Metabolite of DDT
DDT-Dichlorodiphenyltrichloroethane
DEQ-Oregon Department of Environmental Quality
DMEF-Dredged Material Evaluation Framework
DNA-Deoxyribonucleic Acid
DNAPL-Dense Non-Aqueous Phase Liquids
DO-Dissolved Oxygen
DQO-Data Quality Objective
DSL-Oregon Division of State Lands
DWR-Department of Water Resources
ECSI-Environmental Cleanup Site Information Database
EIS-Environmental Impact Statement
EPA-Environmental Protection Agency
ERED-Environmental Residue-Effects Database
ESA-Endangered Species Act
ESU-Evolutionary Significant Units
FDA-Food and Drug Administration
GIS-Geographic Information System
HEAST-Health Effects Assessment Summary Tables
HI-Hazard Index
HPAH-High Molecular Weight Polycyclic Aromatic Hydrocarbons
HW-Hazardous Waste
IMMP-Inspection, Maintenance, and Monitoring Plan
ITI-Infaunal Trophic Index
IRIS-Integrated Risk Information System
ITIS-Integrated Taxonomic Information System
ITM-Inland Testing Manual
LDR-Land Disposal Restrictions
LNAPL-Light Nonaqueous Phase Liquids
LOAEL-Lowest Observed Adverse Effect Level
LPAHs-Low Molecular Weight Polycyclic Aromatic Hydrocarbons
LSD-Least Significant Difference
LUST-Leaking Underground Storage Tank
MCLGs-Maximum Contaminant Level Goals
MCLs-Maximum Contaminant Levels
NAPL-Non-aqueous Phase Liquids

NCP-National Contingency Plan
NFA-No Further Action
NMFS-National Marine Fisheries Service
NOAA-National Oceanic and Atmospheric Administration
NOAEL-No Observed Adverse Effect Level
NODC-National Oceanographic Data Center
NPDES-Natural Pollution Discharge Elimination System
NPL-National Priorities List
NRDA-Natural Resource Damage Assessment
NWEA-Northwest Environmental Advocates
OAR-Oregon Administrative Rules
OCF-On-Site Containment Facility
ODFW-Oregon Department of Fish and Wildlife
ODOT-Oregon Department of Transportation
ODWR-Oregon Department of Water Resources
ORS-Oregon Revised Statutes
OSA-Orphan Site Account
PA-Preliminary Assessment
PAH-Polycyclic Aromatic Hydrocarbons
PCB-Polychlorinated Biphenyl
PCDD-Polychlorinated Dibenzodioxin
PCDF-Polychlorinated Dibenzofuran
PCP-Pentachlorophenol
PDC-Portland Development Commission
PHSMP-Portland Harbor Sediment Management Plan
PPA-Prospective Purchaser Agreement
PRP-Potentially Responsible Party
PSEP-Puget Sound Estuarine Protocols
PSY-Portland Ship Repair Yard
QA/QC-Quality Assurance/Quality Control
OSA-Orphan Site Account
RAGS-Risk Assessment Guidance for Superfund
RAO-Remedial Action Objectives
RCRA-Resource Conservation and Recovery Act
RD/RA-Remedial Design/Remedial Action
RDT-Regional Decision Team
RfDs-Reference Doses
RI/FS-Remedial Investigation/Feasibility Study
RM-River Mile
RME-Reasonable Maximum Exposure
ROD-Record of Decision
RP-Responsible Party
SAM-Sediment Assessment Methodology
SAP-Sampling and Analysis Plans
SIMI-Similarity Index
SMP-Sediment Management Plan

SPI-Sediment Profile Imaging
SQG-Sediment Quality Guideline
TAG-Technical Assistance Grant
TBT-Tributyltin tin
TCA-Trichloroethane
TEC-Trichloroethylene
TCLP-Toxicity Characteristic Leaching Procedure
TEF-Technical Evaluation Framework
TIE-Toxicity Identification Evaluation
TMDL-Total Maximum Daily Load
TOC-Total Organic Compounds
TPH-Total Petroleum Hydrocarbons
TPL-Trust for Public Lands
TRV-Toxicity Reference Value
TSC-Tissue Screening Concentrations
TSS-Total Suspended Solids
TTL-Target Tissue Level
USACE-U.S. Army Corps of Engineers
USFWS-U.S. Fish and Wildlife Service
USGS-U.S. Geological Survey
UST-Underground Storage Tank
WDOH-Washington State Department of Health
VCP-Voluntary Cleanup Program
VOC-Volatile Organics
WRDA-Water Resources Development Act

Appendix K: Glossary of Terms

Applicable or relevant and appropriate requirements (ARARs): The federal Superfund law (CERCLA) specifies that remedial actions must comply with requirements or standards under federal or more stringent state environmental laws that are applicable or relevant and appropriate to the hazardous substances or particular circumstances of a site. Applicable requirements are those protection requirements that specifically address a hazardous substance at a CERCLA site. Relevant and appropriate requirements are those protection requirements that, while not applicable to a hazardous substance, address problems sufficiently similar to those encountered at a CERCLA site to make them useful. (52 FR 32496, August 27, 1987)

Assessment endpoint: An explicit expression of a specific ecological receptor and an associated function or quality that is to be maintained or protected. Assessment endpoints represent ecological receptors directly or as their surrogates for the purposes of an ecological risk assessment. (OAR 340-122-115(7))

Background level: Concentration of hazardous substances, if any, existing in the environment in the location of the facility before the occurrence of any past or present release or releases. (OAR 340-122-115(8))

Benthic infaunal communities: An assemblage of plants, animals, and other organisms that live in or on the sediment and interact with one another, forming a distinct living system with its own composition, structure, environmental relationships, development, and function.

Best Management Practices (BMPs): Methods that have been determined to be the most effective, practical means of preventing or reducing pollution from non-point sources.

Bioaccumulation: The ratio of the concentration of a chemical in an organism to the concentration of that chemical in the ambient medium (usually water).

Bioconcentration: The ratio of the concentration of a chemical in an organism to the concentration of that chemical in the organism's food or in the water it ingests.

Biota-Sediment Accumulation Function (BSAF): The relationship between tissue concentrations and sediment concentrations derived using tissue and sediment chemistry data.

Bioassays: Various biological tests used to determine the toxicity and/or bioaccumulation potential of a hazardous substance.

Brownfields: Abandoned, idled, or under-used industrial and commercial facilities where expansion or redevelopment is complicated by real or perceived environmental contamination.

Carcinogens: Any substance or agent that produces or tends to produce cancer in humans. (OAR 340-122-115(10))

Chemical of interest: This is a hazardous substance that has been identified, without considering toxicity (i.e., by using frequency of detection or comparison to background), as having the potential to pose a risk to human health or the environment.

Cleanup level: Residual concentration of a hazardous substance that is determined to be protective of public health, safety and welfare, and the environment under specified exposure conditions. (OAR 340-122-115(11))

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA): A federal act (Public Law 96-510; December 11, 1980) that provides for liability, compensation, cleanup, and emergency response for hazardous substances released into the environment and the cleanup of inactive waste disposal sites.

Conceptual model: A written description and visual representation of predicted relationships between receptors (both human and ecological) and the hazardous substances to which they may be exposed.

Consent orders: Legal vehicle to ensure cleanup move forwards at a contaminated site; typically contains stipulated penalties for non-performance by the liable person and cannot be unilaterally terminated.

Contaminant of concern: A hazardous substance that is present in such concentrations that the contaminant poses a threat or a potentially unacceptable risk to public health, safety or welfare, or the environment. (OAR 340-122-115(15))

Data Quality Objectives (DQOs): Qualitative and quantitative statements of the overall level of uncertainty that a decision-maker will accept in results or decisions based on environmental data. These provide the statistical framework for planning and managing environmental data operations consistent with user's needs.

Endangered Species Act (ESA): Federal statute enacted in 1973 to conserve species and ecosystems. Species facing possible extinction are listed as “threatened” or “endangered,” or as “candidate” species for such listings. When such a listing is made, recovery and conservation plans are draw up to ensure the protection of the species and its habitat.

Environmental Cleanup Law: Oregon’s revised cleanup law, enacted in 1995, which expanded DEQ’s authority related to identification, investigation, and cleanup of hazardous substances.

Facility: Any site or area where a hazardous substance has been deposited, stored, disposed of, placed, or otherwise come to be located, and where a release has occurred or whether there is a threat of a release. (OAR 340-122-115(26))

Feasibility study: Provides the decision-maker with an assessment of remedial alternatives, including their relative strengths and weaknesses, and the trade-offs in selecting one alternative over another. Conducted if the risk assessment performed during the remedial investigation establishes the presence of unacceptable risks.

Harbor-wide assessment: Remedial and other investigations conducted in the lower Willamette River (River Miles 0.0 to 26.5), inclusive of Portland Harbor (River Miles 3.5 to 9.5), and possibly extending into the Columbia River near its confluence with the Willamette.

Hazard Index: A number equal to the sum of the hazard quotients attributable to systemic toxicants with similar toxic endpoints, where hazard quotient is the ratio of the applied dose to the reference dose and the reference dose is typically the highest dose causing no adverse effects on survival, growth or reproduction in human populations.

Hazard Ranking System: The principal mechanism EPA uses to place uncontrolled waste sites on the National Priorities List. Numerically based screening system that uses information from initial, limited investigations to assess the relative potential of sites to pose a threat to human health or the environment.

Hazardous waste: Solid wastes that have been determined to be a hazardous waste because they possess at least one of four characteristics (ignitability, corrosivity, reactivity, or toxicity), appear on special EPA lists, or are defined as hazardous by Oregon Rule.

Hot spots: For groundwater or surface water, hazardous substances having a significant adverse effect on beneficial uses of water or waters to which the hazardous substance would be reasonably likely to migrate and for which treatment is reasonably likely to restore or protect such beneficial uses within a reasonable time; for media other than water (including sediments), defined by the presence of high concentrations of hazardous substances that are likely to migrate and create a hot spot of contamination elsewhere, or by the presence of hazardous substances that are not reliably confinable. (OAR 340-122-115(31))

Institutional control: Legal or administrative tool or action taken to reduce the potential for exposure to hazardous substances, which may include, but are not limited to, use restrictions, environmental monitoring requirements, and site access and security measures. (OAR 340-122-115(32))

Joint and several liability: Under CERCLA, this legal concept relates to the liability for Superfund site cleanup and other costs on the part of more than one potentially responsible party (i.e., if there were several owners or users of a site that became contaminated over the years, they could all be considered potentially liable for cleaning up the site).

National Contingency Plan (NCP): A set of regulations that describe the organizational structure and procedures for preparing for and responding to discharges of oil and releases of hazardous substances, pollutants, and contaminants.

National Priorities List (NPL): A published list of hazardous waste sites in the country that are eligible for extensive, long-term cleanup under the Superfund program.

No further action (NFA): A determination by DEQ, following a preliminary assessment, a risk assessment or the completion of remedial action, that no unacceptable risks remain to human health or to the environment.

Noncarcinogen: hazardous substance with adverse health effects on humans other than cancer. (OAR 340-122-115(36))

Orphan Site Account (OSA): Account established to be used to fund investigation and remedial actions where liable parties are unknown, unwilling or unable to participate. DEQ uses litigation to recover Orphan Site Account funds from recalcitrant responsible parties.

Preliminary assessment (PA): An assessment conducted for the purpose of determining whether additional investigation, removal, remedial action, or related engineering or institutional controls are needed to assure protection of public health, safety and welfare, and the environment. (OAR 340-122-072).

Record of decision (ROD): A document that details the factors that shaped the decision to select a specific remedial alternative over others. (OAR 340-122-110)

Release: Any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping or disposing into the environment including the abandonment or discarding of barrels, containers and other closed receptacles containing any hazardous substance, or any threat thereof, but excluding exposures within a workplace, emissions from the engine exhaust, nuclear material and the normal application of fertilizer.

Remedial Alternative: An action considered in the feasibility study intended to reduce or eliminate unacceptable risks to human health and the environment at a site. A range of remedial alternatives are considered in the feasibility study while the selection of a specific remedial alternative over others is documented in the record of decision.

Remedial action: The selected alternative that is documented in the record of decision.

Remedial investigation (RI): Actions undertaken to characterize the full nature and extent of contamination, including characterization of hazardous substances, characterization of the facility, performance of human health and ecological risk assessments, and collection and evaluation of information relevant to the identification of hot spots of contamination.

Removal action: actions necessary to prevent, minimize, or mitigate damage to the public health, safety, and welfare, and the environment (OAR 340-122-070). Generally taken in response to an imminent threat, it may be conducted at any point in the site response process, and may include source control measures, removal of highly contaminated material, and/or posting warning signs or constructing fences around a contaminated site.
Risk: Probability that a hazardous substance, when released into the environment, will cause adverse effects in exposed humans or ecological receptors.

Risk assessment: The process of evaluating whether a hazardous substance poses a potential threat, either currently or in a reasonably likely future, to human health and the environment.

Sediment: Soils, sand, organic matter, or minerals that wash from land or accumulate on the bottom of a water body

Sediment Quality Guidelines (SQGs): Numeric sediment concentrations above which further biological testing and/or a feasibility study may be warranted and below which suspected sediment contaminants are unlikely to pose an unacceptable risk.

Site assessment: Investigation to assess priority for follow-up, which may be based on the adequacy of data linking a site to a release or on the presence of potentially impacted receptors.

Site discovery: Process of identifying and documenting a release of hazardous substance to the environment.

Site-specific assessment: A remedial investigation conducted at a site or facility under the jurisdiction of Oregon's environmental cleanup statutes and rules.

Subsistence fishing: Persons who obtain a significant portion, more than the general or recreational fish-eating population, of their dietary protein from the consumption of self-caught fish of various species.

Tissue Screening Concentrations (TSCs): Contaminant concentration in fish tissue below which adverse effects are not expected for 95% of the fish species.

Target Tissue Levels (TTLs): A tissue concentration in food items (e.g., fish or shellfish) which does not pose an unacceptable risk to birds, mammals, or humans that consume these food items.

Portland Harbor: The six-mile (River Mile 3.5 to 9.5) industrialized segment of the Willamette River located between Swan and Sauvie Islands.

Voluntary cleanup agreement: Legal vehicle to ensure cleanup moves forward at a contaminated site; entered into voluntarily by the site, enforceable by administrative penalties or by court action.

Willamette River: The 187-mile long river that flows northward in northwestern Oregon between the coast and Cascade Mountains.